CLAIMS

I Claim:

1. A system to facilitate the arrangement of methods within an object built using an object oriented programming framework, the system comprising:

a plurality of methods comprising an object, each method consisting of a software module;

a control center comprising a graphical user interface to facilitate ordering the methods by a person who is one of a developer and a user;

an object workbench invoked by the person opening a code file, the object workbench displayed by the graphical user interface and comprising a window that contains a text list of the individual methods comprising the object;

a pointing device to select an individual method in the list;

a dialog box displayed by the graphical user interface when the individual method in the list is selected;

an editable field within the dialog box for entry by the person of a designation for the selected method corresponding to a desired place within a sequence in which the methods are to be performed; and

an intelligent mechanism whereby method software modules can self organize within the object, thereby permitting automation of the specification of the object;

whereby the system enables a developer or a relatively unsophisticated user to specify the order in which the methods are to be executed.

2. The system of Claim 1 wherein the object is one of an object in an object library and a customized object coded by the developer.

3. The system of Claim 1 wherein the pointing device is a mouse.

4. The system of Claim 1 wherein the person enters a unique sequential integer ascending from the number "1" in the editable field to designate the place for the selected method within the sequence.

5. The system of Claim 1 wherein the system integrates seamlessly within the object oriented programming framework that is modular and highly scalable.

6. The system of Claim 1 wherein the system enables customized configuration and implementation of a plurality of objects through ordering of methods comprising the objects.

7. The system of Claim 1 wherein the system is embedded within a computer network testing and monitoring tool to provide an automatic sequencing mechanism for self organizing of methods within the graphical user interface used to specify the methods.

8. The system of Claim 1 wherein the system is embedded within a computer network testing and monitoring tool that provides distributed advanced protocol and technology

independent capabilities that enable publishing, controlling, and running the object anywhere on the computer network or Internet.

9. The system of Claim 8 wherein the object is a toolbox consisting of a member of the group of toolboxes comprising a) an eBusiness toolbox that enables rapid testing of Web sites by running a plurality of virtual Web users against a Web site and enables capture and play back of wireless browser traffic, b) an ODBC toolbox to construct scenarios that issue SQL against an ODBC compliant DBMS for database access, c) a Mail toolbox to stress and monitor SMTP and POP3 e-mail servers and to enable message size and e-mail addresses to be randomized for testing and to detect e-mail problems, d) an OS toolbox to construct scenarios that use UNIX or Windows command line utilities and which contains a "PING" (Preventative InterNet Guard) object that enables the person to monitor any machine and take action on failure, including paging or notifying a system administrator, and e) an FTP toolbox to enable fast testing of FTP servers and allow the person to specify message size, upload, and download information to test user experience at a Web site, including FTP downloads.

10. The system of Claim 8, further comprising a repository to centrally store information and results.

11. The system of Claim 10 wherein the repository resides in an ODBC compliant datastore.

12. The system of Claim 1 wherein the control center further comprises an object browser to list the object and wherein the pointing device enables the person to select the entire object and to drag and drop the entire object into a scenario wizard window displayed by the graphical user interface, the methods comprising the object having the desired order designated using the editable field within the dialog box.

13. The system of Claim 12 wherein each individual method comprising the dropped object appears as a respective icon in the scenario wizard window.

14. The system of Claim 12 wherein the person enters a unique sequential integer ascending from the number "1" in the editable field and wherein method icons are automatically arranged from the top of the scenario wizard window towards the bottom of the scenario wizard window in the order previously designated using the editable field from the lowest number to the highest.

15. The system of Claim 1, further comprising a second dialog box displayed by the graphical user interface when the individual method in the list is selected to specify at least one parameter for the method.

16. The system of Claim 8 wherein the control center provides real time graphing, results, and user states enabling the person to observe what is occurring during object execution.

17. The system of Claim 10, further comprising a report generator and wherein result data populates the repository and enables generation of reports using the report generator.

18. The system of Claim 1 wherein the system enables customized configuration and implementation of the object.

19. A method to effectively re-order available methods within an object, the method comprising the steps of:

opening a code file corresponding to an object;

invoking an object workbench in response to opening the code file;

causing a window to appear in response to invoking the object workbench, the window displaying a text list of individual methods comprising the object;

providing a pointing device;

selecting an individual method in the list with the pointing device;

causing a dialog box to appear in response to selecting the method in the list;

providing an editable field within the dialog box;

entering a designation for the selected method in the editable field corresponding to a desired place in an order in which the selected method is to be performed; and

conforming the structured ordering of the code so that the method is performed at the designated place in the order;

thereby enabling modularized methods aggregated within an object to be ordered using a dialog box for configuring the object.

20. The method of Claim 19, further comprising the step of modifying the code corresponding to at least one method.

21. The method of Claim 19 wherein the pointing device is a mouse and double clicking the left mouse button with a mouse pointer on the selected method in the list causes the dialog box to appear.

22. The method of Claim 19 wherein the designation is a unique sequential integer ascending from the number "1" entered in the editable field.

23. The method of Claim 19 wherein the step of selecting an individual method is repeated for each method in the list.

24. The method of Claim 19, further comprising the steps of:

selecting an entire object from an object browser with the pointing device;

dragging and dropping the selected object into a scenario wizard window; and

displaying the methods comprising the selected object in the scenario wizard window in the order designated by the corresponding entries in the editable field to specify the order of the methods.

25. The method of Claim 24 wherein the pointing device is a mouse and wherein the step of selecting the entire object comprises dragging and dropping the entire object into the scenario wizard window.

26. The method of Claim 25 wherein each individual method included in the dropped object appears as an icon in the scenario wizard window.

27. The method of Claim 25 wherein the designation is a unique sequential integer ascending from the number "1" entered in the editable field and the methods are automatically arranged from the top of the scenario wizard window towards the bottom of the scenario wizard window in the order from the lowest number to the highest.

28. The method of Claim 19, further comprising the step of specifying at least one parameter for the method using a second dialog box.

29. The method of Claim 19 wherein there is a plurality of objects, and further comprising the steps of:

specifying a scenario by selecting at least one object to be run; and

automatically organizing the methods within the at least one object in the designated order in response to specifying a scenario;

thereby permitting automation of the ordering of methods contained in the at least one object within the specified scenario.

30. The method of Claim 29 wherein objects are easily and quickly configured so that testing and monitoring scenarios incorporating the objects can be created and modified for rapid deployment as mission critical testing and monitoring scenarios for computer networks to address an uptime problem.